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13. ABSTRACT

One hundred and seven confirmed references are listed on the subject of Venezuelan equine encephalomyelitis, bringing the total to 570.

KEYWORDS:

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BIBLIOGRAPHY
ON
VENEZUELAN EQUINE ENCEPHALOMYELITIS (VEE)

SUPPLEMENT 1

1 September 1972

Prepared by
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U. S. ARMY MEDICAL RESEARCH
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FORWORD

Supplement 1 continues the listing of confirmed references on VEE shown in the original listing dated 15 February 1972 (AD 738 795).

Supplement A and B have since been verified in part:

A8 is 522; A9, 523; A10, 534; A11, 539; A12, 550; A14, 557.

B5, 504; B9, 505; B10, 520; B11, 521; B12, 524; B17, 542;
B18, 551; B19, 552.

The Index (p. 11) has been revised to include original listings and the added 107 references.

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Microbiologist

September 1972

BIBLIOGRAPHY
ON
VENEZUELAN EQUINE ENCEPHALOMYELITIS (VEE)

SUPPLEMENT 1

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best available copy.

464. Acha, F. N., and H. B. Hubbard. Some international aspects of veterinary public health. J. Am. Vet. Med. Assoc. 155:12:2100-2103, 1969.
465. Arabalyan, A. S., L. K. Menshikh, and F. I. Ershov. (Factors affecting the level of infectivity of RNA of Venezuelan equine encephalomyelitis (VEE) virus). Vop. Virusol. 16:5:527-532, 1971 (Russ).
466. Albrecht, P. Pathogenesis of neurotropic arbovirus infections. Current Topics Microbiol. Immunol. 43:44-91, 1968.
467. Anastas'yan, S. N. American infectious equine encephalomyelitis. In Little Known Zoonoses Transmitted from Animals to Man. Frunze, USSR, 1963. pp. 3-74. (Translation MULO057; JPRS 26344; pp. 27-31).
468. Anonymous. Conference urges use of VEE vaccine. J. Am. Vet. Med. Assoc. 161:3:252-253, 1972.
469. Anonymous. Fight against VEE. ASM News 38:3:156, 1972.
470. Anonymous. New, exotic arboviruses in Florida everglades. Pub. Health Rep. 83:3:207, 1968.
471. Anonymous. VEE surveillance. USA Med. Dept Newsletter 3:3:12, 1972.
472. Anonymous. VEE vaccination again under way in Maryland. The Frederick News. May 2, 1972.
473. Anonymous. VEE vaccine reported safe and effective. Arabian Horse News 24:5:48, 75, 1972.
474. Berendt, R. F., E. L. Dorsey, and H. J. Hearn. Virucidal properties of light and SO₂. I. Effect on aerosolized Venezuelan equine encephalomyelitis virus. Proc. Soc. Exp. Biol. Med. 139:1:1-5, 1972.
475. Berendt, R. F., E. L. Dorsey, and H. J. Hearn. Virucidal properties of light and SO₂. II. Effect of a low gas concentration on aerosolized virus. Proc. Soc. Exp. Biol. Med. 138:3:1005-1008, 1971.
476. Bergold, G. H., L. A. Gonzalez Marquez, R. Mazzali, and K. Munz. Structure of nine arboviruses. J. Gen. Virol. 5:1:135-140, 1969.
477. Brown, D. G. Clinical studies in burros and Shetland ponies after vaccination with Venezuelan equine encephalomyelitis vaccine, TC-83. Vet. Med./Sm. Animal Clinician 67:5:505-511, 1972.

478. Bryans, J. T., L. E. Irickett, T. J. Swerczek, and D. C. Morgan. A report on VEE vaccination. *Arabian Horse News* 24:3:19, 21, 66, 69, 77, 1972.
479. Casals, J. Arboviruses. *Am. J. Clin. Path.* 57:6:762-770, 1972.
480. Communicable Disease Center. Venezuelan equine encephalomyelitis--The first naturally acquired human case in the United States. *In Neurotropic Viral Diseases Surveillance. Encephalitis. Annual Encephalitis Summary - 1968.* pp. 24-28. October 15, 1969.
481. Center for Disease Control. Arthropod-borne encephalitis (Arboviral encephalitis). *In Neurotropic Viral Diseases Surveillance. Encephalitis. Annual Encephalitis Summary - 1969.* pp. 2, 9, 12. October 15, 1970.
482. Center for Disease Control. Arthropod-borne encephalitis (Arboviral encephalitis). *In Neurotropic Viral Diseases Surveillance. Encephalitis. Annual Encephalitis Summary - 1970.* p. 9. January 1972.
483. Center for Disease Control. Venezuelan equine encephalitis. *Zoonoses Surveillance. VEE Monthly Summary.* No. 1, April 1972; No. 2, May-June 1972; No. 3, July 1-10, 1972; No. 4, July 11-20, 1972; No. 5, July 21-31, 1972; No. 6, August 1-21, 1972.
484. Chepuris, G. K. S., and V. M. Zhdanov. Investigation of species-specific cellular antigens of some RNA-containing viruses by inducing immunological tolerance in mice. *Vestn. Akad. Med. Nauk SSSR* 24:12:42-44, 1969. (Translation MUL 0409; JPRS 49791).
485. Correa-Giron, P., C. H. Calisher, and G. M. Baer. Epidemic strain of Venezuelan equine encephalomyelitis virus from a vampire bat captured in Oaxaca, Mexico, 1970. *Science* 175:4021:546-547, 1972.
486. Danes, L., and J. Hruskova. Diagnosis of Venezuelan equine encephalomyelitis virus by immunofluorescence. *Acta Virol.* 13:443-446, 1969.
487. de Mucha Macias, J. Estudios epidemiologicos sobre virus arbor en el sureste de Mexico. *Salud Publ. Mexico* 5:4:523-527, 1963.
488. de Mucha Macias, J. Infecciones por virus arbor. Estudios realizados en el Instituto Nacional de Virologia de la Secretaria de Salubridad y Asistencia. *Cac. Med. Mexico* 93:5:415-420, 1963.
489. de Mucha Macias, J., and M. V. Z. A. Morilla Gonzalez. Encefalitis equina de Venezuela. Estudio de una cepa aislada en Mexico. *Rev. Invest. Salud Publ. (Mex)* 27:2:84-110, 1967.
490. de Mucha Macias, J. El problema de la encefalitis equina en Mexico. *Salud Publ. Mexico* 13:2:165-168, 1971.

491. Derkach, Yu. S., L. V. Uryvaev, and V. M. Zhdanov. (Study of protein components of Venezuelan equine encephalomyelitis virus by means of electrophoresis and isoelectric focussing). *Vop. Virusol.* 17:2:211-214, 1972 (Russ).
492. Dickerman, F. W., W. F. Scherer, and J. Diaz-Hajera. Ecologic studies of Venezuelan encephalitis virus in southeastern Mexico. I. Introduction and study sites. *Am. J. Trop. Med. Hyg.* 20:5:730-739, 1971.
493. Dickerman, F. W., M. L. Zarate, W. I. Scherer, and J. de Mucha Macias. Venezuelan encephalitis virus along the central and northern Gulf coast of Mexico as of July-September 1969. *Bol. Of. Sanit. Pan-Am.* 71:2:143-151, 1971.
494. Eddy, G. A., D. H. Martin, W. C. Reeves, and K. M. Johnson. Field studies of an attenuated Venezuelan equine encephalomyelitis vaccine (Strain TC-83). *Infect. Immun.* 5:2:160-163, 1972.
495. Ehrlich, R., and E. Miller. Effect of NO₂ on airborne Venezuelan equine encephalomyelitis virus. *Appl. Microbiol.* 23:3:481-484, 1972.
496. (Y)ershov, F. I., and V. M. Zhdanov. Relationship between group A arbovirus reproduction and cytochemical changes in infected cells. *Acta Virol.* 12:2:136-143, 1968.
497. Ershov, F. I., V. M. Zhdanov, L. V. Uryvaev, and A. S. Agabalyan. (The phenomenon of hybrid (sic, hibrid) ribonucleoprotein complexes ("pseudoviruses") formation). *Vestn. Akad. Med. Nauk SSSR* 26:2:32-37, 1971. (Russ).
498. Franck, P. T., and K. M. Johnson. An outbreak of Venezuelan equine encephalomyelitis in Central America. Evidence for exogenous source of a virulent virus subtype. *Am. J. Epidemiol.* 94:5:487-495, 1971.
499. Gaidamovich, S. Ya., Ya. Ya. Tsilinsky, A. I. Lvova, and N. V. Khutoretskaya. (Features of multiplication of different clones of Venezuelan equine encephalomyelitis virus in Aedes aegypti mosquitoes). *Med. Parazit.* 40:3:267-271, 1971. (Russ).
500. Gaidamovich, S. Ya., Ya. Ya. Tsilinsky, A. I. Lvova, and N. V. Khutoretskaya. Aedes aegypti mosquitoes as an experimental model for studies on the ecology and genetics of Venezuelan equine encephalomyelitis virus. *Acta Virol* 15:4:301-308, 1971.
501. Gaidamovich, S. Ya., Ya. Ya. Tsilinsky, A. I. Lvova, and N. V. Khutoretskaya. (Genetic markers of Venezuelan equine encephalomyelitis virus manifested upon multiplication in vectors). *Vop Virusol.* 16:4:412-415, 1971 (Russ).
502. Gaitskhoki, V. S., F. I. Ershov, O. I. Kiselev, L. K. Menshikh, O. V. Zaitseva, L. V. Uryvaev, S. A. Neifakh, and V. M. Zhdanov. (Replication of infectious viral RNA in isolated mitochondria. I. Penetration of viral RNA into mitochondria and its effect on mitochondrial synthesis). *Vop. Virusol.* 16:3:269-273, 1971 (Russ).

503. Galindo, F. *Culex* mosquitoes of Malonoconion and related subgenera as hosts of arboviruses. *Am. Microbiol.* 11(A):83-87, 1963.
504. Gallia, F. El efecto "in vitro" de la tiourea y otros compuestos quimicos sobre el virus encefalomielitico tipo Venezuela. *Bol. Inst. Invest. Vet. (Caracas)* 2:7:203-248, 1944 (Engl summary).
505. Gapochko, K. G., N. S. Garin, and V. I. Lebedinskiy. Venezuelan equine encephalomyelitis. In *The Clinical Picture and Epidemiology of Some Little-known Infectious Diseases*. State Publishing House of Medical Literature, Moscow, 1957. pp. 1-216. (Translation MVL 0035; JPRS 3413, pp. 43-45).
506. Garcia-Tamayo, J. Acid phosphatase activity in mouse brain infected with Venezuelan equine encephalomyelitis virus. *J. Virol.* 8:2:232-241, 1971.
507. Gilyard, R. T. Estudio clinico de la encefalomiелitis equina Venezolana en Trinidad. *Bol. Inst. Invest. Vet. (Caracas)* 2:11:341-366, 1945.
508. Grayson, M. A., and F. Galindo. Ecology of Venezuelan equine encephalitis virus in Panama. *J. Am. Vet. Med. Assoc.* 155:12:2141-2145, 1969.
509. Gruber, J., and D. Birrell. Inactivated complement fixing antigen from Venezuelan equine encephalitis virus grown in tissue culture. *Proc. Soc. Exp. Biol. Med.* 138:1:4-6, 1971.
510. Hayes, R. O., P. Holden, and C. J. Mitchell. Effects of ultra-low volume applications of malathion in Hale County, Texas. IV. Arbovirus studies. *J. Med. Entomol.* 8:2:183-188, 1971.
511. Hearn, H. J., Z. V. Siliokas, and A. A. Andersen. Factors influencing virulence and plaque properties of attenuated Venezuelan equine encephalomyelitis virus populations. *J. Virol.* 4:4:545-546, 1969.
512. Hill, E. F., D. A. Eliason, and J. W. Kilpatrick. Effects of ultra-low volume applications of malathion in Hale County, Texas. III. Effect on nontarget animals. *J. Med. Entomol.* 8:2:173-179, 1971.
513. Hruskova, J., and V. Rychterova. Infection of chicks with Venezuelan equine encephalomyelitis virus. *Acta Virol.* 15:4:324-325, 1971.
514. Hruskova, J., V. Rychterova, and V. Kliment. The influence of infection with Venezuelan equine encephalomyelitis virus on antibody response against sheep erythrocytes. I. Experiments on mice. *Acta Virol.* 16:115-124, 1972.
515. Hruskova, J., V. Rychterova, and V. Kliment. The influence of infection with Venezuelan equine encephalomyelitis virus on antibody response against sheep erythrocytes. II. Experiments on guinea pigs. *Acta Virol.* 16:125-132, 1972.
516. Johnson, J. W. Susceptibility of tissue cultures of minced Aedes aegypti pupae and adults to infection with Venezuelan equine encephalomyelitis virus. *Am. J. Trop. Med. Hyg.* 20:5:761-764, 1971.

517. Kagan, K. Ya., F. I. Ershov, I. V. Rakovskaya, A. A. Tsareva, and V. M. Zdanov. (The effect of Mycoplasma infection on the reproduction of some RNA viruses). Vop. Virusol. 12:4:478-485, 1967 (Russ).
518. Karpova, E. F., Ya. Ya. Tsilinskaya, and N. V. Loginova. (Isolation of infectious RNA from certain group A and B arboviruses). Vop. Virusol. 16:2:230-233, 1971 (Russ).
519. Kubes, V., and F. I. Rios. Datos preliminares sobre el agente etiológico de la encefalomiелitis infecciosa de los equinos en Venezuela. Gac. Med. Caracas 46:350-352, 1939 & Lit. y Tip. Vargas, Caracas, 1939. pp. 7-12 (Translation MUL 0402).
520. Kubes, V., and A. Diamante. Estudios de inmunidad cruzada entre el virus de la encefalomiелitis equina de Venezuela y los virus encefalomiелiticos Norteamericanos este y oeste y el Argentino. Bol. Inst. Invest. Vet. (Caracas) 1:2:49-79, 1942-43 (Engl. summary).
521. Kubes, V., and F. Gallia. Fenomeno de para-inmunidad entre los virus de la encefalomiелitis equina y de la rabia paralitica de Venezuela. Bol. Inst. Invest. Vet. (Caracas) 1:3:81-100, 1942-43 (Engl. summary).
522. Kubes, V. I. Relaciones inmunologicas entre el virus encefalomiелitico equino de Colombia y el de Venezuela. Bol. Inst. Invest. Vet. (Caracas) 1:5:155-168, 1942-43 (Engl. summary).
523. Kubes, V. II. Virus encefalomiелitico equino, tipo Venezuela, en Trinidad. Bol. Inst. Invest. Vet. (Caracas) 1:5:169-174, 1942-43. (Engl. summary).
524. Kubes, V., and F. Gallia. Neutralizacion del virus encefalomiелitico equino tipo Venezuela por sueros humanos. Bol. Inst. Invest. Vet. (Caracas) 2:6:179-198, 1944-45 (Engl. summary).
525. Kubes, V., A. Diamante, and A. Ruiz A. Virus encefalomiелitico equino, tipo Venezuela, en el Ecuador. Bol. Inst. Invest. Vet. (Caracas) 2:9: 295-310, 1944-45 (Engl. summary).
526. Kubes A., V., and C. del Aguila B. Brote de encefalomiелitis equina en Guatemala, 1969. Rev. Fac. Med. Vet. Zoot. 2:4:57-62, 1969 (Engl. summary).
527. Larsen, J. I., and R. F. Ashley. Demonstration of Venezuelan equine encephalomyelitis virus in tissues of Aedes aegypti. Am. J. Trop. Med. Hyg. 20:5:754-760, 1971.
528. Levi-Castillo, R. La encefalomiелitis humana a virus equino Venezolana en el Ecuador. Rev. Ecuat. Entomol. Parasitol. 1:2:29-36, 1953.
529. Martin, D. H., G. A. Eddy, W. D. Sudia, W. C. Reeves, V. F. Newhouse, and K. M. Johnson. An epidemiologic study of Venezuelan equine encephalomyelitis in Costa Rica, 1970. Am. J. Epidemiol. 95:6:565-578, 1972.

530. McAllister, R. M. Viral encephalitis. *Ann. Rev. Med.* 13:389-410, 1962.
531. McKanus, A. J., and D. M. Robinson. Stability of live attenuated Venezuelan equine encephalitis vaccine. *Appl. Microbiol.* 23:654-655, 1972.
532. Monath, T. P. C., H. B. Lindsey, J. G. Nuckolls, W. A. Chappell, and E. E. Henderson. Comparison of methods for removal of nonspecific inhibitors of arbovirus hemagglutination. *Appl. Microbiol.* 20:5:748-753, 1970.
533. Monlux, W. S., A. J. Luedke, and J. Eowne. Central nervous system response of horses to Venezuelan equine encephalomyelitis vaccine (TC-83). *J. Am. Vet. Med. Assoc.* 111:3:265-269, 1972.
534. Morales, A., and H. Vidales. Distribucion de mosquitos selvaticos en San Vicente de Chucuri, Colombia. *Lozenia (Acta Zool. Colombiana)* No. 13:1-16, 1962 (later version of No. 157, Groot et al.).
535. Pedersen, Jr., C. E., D. H. Robinson, and F. E. Cole, Jr. Isolation of the vaccine strain of Venezuelan equine encephalomyelitis virus from mosquitoes in Louisiana. *Am. J. Epidemiol.* 95:5:490-496, 1972.
536. Reeves, W. C. Can the war to contain infectious diseases be lost? *Am. J. Trop. Med. Hyg.* 21:3:251-259, 1972.
537. Reitman, K. Nonviable Venezuelan equine encephalomyelitis hemagglutinin prepared from tissue cultures by gamma radiation. *Appl. Microbiol.* 18:2: 278-279, 1969.
538. Ruano, C. E., O. E. Galvez G., and J. A. Ruiz. Contribucion al estudio serologico de la encefalomyelitis equina en Guatemala. *Rev. Fac. Med. Vet. Zoot.* 2:4:111-117, 1969 (Engl. summary).
539. Ruiz Martinez, C. Equine encephalomyelitis in the Americas. *Bull. Of. Int. Epizoot.* 57:354-398, 1962 (Fr.) 302-353 (Sp.) (Translation MUL 0403).
540. Ruiz Martinez, C. Situation actuelle en Amerique latine en ce qui concerne les maladies infectieuses equines. *Bull. Of. Int. Epizoot.* 71:7-8:937-976, 1969 (Translation MUL 0419, partial).
541. Rusakiev, M. (Studies on the spread of arboviruses transmitted by mosquitoes in Bulgaria). *Sci. Works Res. Inst. Epidemiol. Microbiol., Sofia* 12:237-240, 1968 (Engl. abstract only).
542. Samper, B., and A. Soriano Lleras. Nuevas observaciones sobre una cepa del virus de la encefalomyelitis equina. *Bol. Inst. Nac. Hig. Samper Martinez.* No. 10:5-8, 1943.
543. Scherer, W. F., E. W. Dickerman, L. K. Jordan, S. Saidi, M. L. Zarate, and A. K. Ventura. Ecologic studies of Venezuelan encephalitis virus in south-eastern Mexico. II. Prevalence, and geographic and temporal distribution of virus measured by sentinel hamsters and mice. *Am. J. Trop. Med. Hyg.* 20:5:740-753, 1971.

544. Scherer, W. F., R. W. Dickerman, A. Diaz-Najera, E. A. Ward, M. H. Miller, and P. A. Schaffer. Ecologic studies of Venezuelan encephalitis virus in southeastern Mexico. III. Infection of mosquitoes. *Am. J. Trop. Med. Hyg.* 20:6:969-979, 1971.
545. Scherer, W. F., R. W. Dickerman, R. P. La Fiandra, C. Wong Chia, and J. Terrian. Ecologic studies of Venezuelan encephalitis virus in southeastern Mexico. IV. Infections of wild mammals. *Am. J. Trop. Med. Hyg.* 20:6:980-988, 1971.
546. Scherer, W. F., R. W. Dickerman, C. Campillo-Sainz, M. L. Zarate, and E. Gonzales. Ecologic studies of Venezuelan encephalitis virus in southeastern Mexico. V. Infection of domestic animals other than equines. *Am. J. Trop. Med. Hyg.* 20:6:989-993, 1971.
547. Scherer, W. F., J. V. Ordonez, F. B. Jahrling, E. A. Pancake, and R. W. Dickerman. Observations of equines, humans and domestic and wild vertebrates during the 1969 equine epizootic and epidemic of Venezuelan encephalitis in Guatemala. *Am. J. Epidemiol.* 95:3:255-266, 1972.
548. Simpson, D. I. H. Arbovirus diseases. *Brit. Med. Bull.* 28:1:10-15, 1972.
549. Solianik, R. G., V. D. Podoplekin, and Yu. V. Fedorov. Experimental mutability of the Venezuelan equine encephalomyelitis virus. I. The mutant characters, induced by alkylating compounds. *Genetika* 7:7:130-137, 1971.
550. Solianik, R. G., V. D. Podoplekin, and Yu. V. Fedorov. Experimental mutability of the Venezuelan equine encephalomyelitis virus. II. Characters of mutants induced by nitrous acid. *Genetika* 7:5:109-113, 1971.
551. Soriano Lleras, A., and L. Figueroa. Aislamiento de un virus de un caballo atacado de "peste loca" en Bogota. *Bol. Inst. Nac. Hig. Samper Martinez.* No. 8:3-15, 1942.
552. Soriano Lleras, A. Nota sobre la encefalomyelitis equina en Colombia. *An. Soc. Biol. Bogota* 1:72-74, 1943.
553. Sotomayor Navas, G. Concentracion del virus de la encefalomyelitis equina, tipo Venezolano (cepa Kanabi) en la sangre de cobayas. *Rev. Ecuat. Entomol. Parasitol.* 1:2:25-28, 1953.
554. Spertzel, R. O. Overview of the 1971 Texas Venezuelan equine encephalomyelitis epizootic. *Proc. 75th Annual Meeting, U. S. Animal Health Assoc.*, 1971. pp. 162-165.
555. Sudia, W. D., and V. F. Newhouse. Venezuelan equine encephalitis in Texas, 1971. Informational report. *Mosquito News* 31:3:35-351, 1971.
556. Taylor, W. M., and E. Buff. Transmissibility of an attenuated Venezuelan equine encephalomyelitis vaccine virus. *J. Am. Vet. Med. Assoc.* 161:2:159-163, 1972.

557. Todd, F. L. Foreign animal diseases of public health significance. *Proc. Am. Vet. Med. Assoc.* 1955, pp. 458-464.
558. Tsilinsky, Ya. Ya., B. V. Gushchin, S. M. Klimenko, and D. K. Lvov. Variations of virion sizes in different clones of Venezuelan equine encephalomyelitis virus. *Arch. ges. Virusforsch.* 34:301-309, 1971.
559. Tsilinsky, Ya. Ya., B. V. Gushchin, S. M. Klimenko, and D. K. Lvov. Morphological peculiarities of virions in clones and population of Venezuelan equine encephalomyelitis virus. *Acta Virol.* 15:3:177-186, 1971.
560. Tsilinsky, Ya. Ya., B. V. Gushchin, S. M. Klimenko, and D. K. Lvov. (Relationship between biological properties of Venezuelan equine encephalomyelitis virus and sizes of virions). *Vop. Virusol.* 16:5:573-576, 1971 (Russ).
561. Uryvaev, L. V., Y. S. Derkach, F. I. Yershov, and V. M. Zhdanov. Proteins of Venezuelan equine encephalomyelitis virions. *Experientia* 27:3:348-349, 1971. (English version of No. 434, Uryvaev et al.)
562. Uryvaev, L. V., G.-K. S. Chepulis, Yu. S. Derkach, V. M. Zhdanov, and F. I. Yershov. (Protein components and antigens of Venezuelan equine encephalomyelitis virus). *Vop. Virusol.* 16:5:586-589, 1971 (Russ).
563. Ventura, A. K., and W. F. Scherer. Infectivity of nucleic acid and adsorptive properties of Venezuelan encephalitis virions inactivated by lipid solvents. *Proc. Soc. Exp. Biol. Med.* 134:3:583-590, 1970.
564. Vestergaard, B. F., and W. F. Scherer. An RNA viral infection of hamster testes and uteri resulting in orchitis and effects on fertility and reproduction. *Am. J. Path.* 64:3:541-555, 1971.
565. von Spröckhoff, H., and E. Ising. On the presence of viruses of the American equine encephalomyelitis in Central Europe. *Arch. ges. Virusforsch.* 34:371-380, 1971.
566. Walton, T. E., and K. M. Johnson. Experimental Venezuelan equine encephalomyelitis virus infection of the bovine. *Infect. Immun.* 5:2:155-159, 1972.
567. Walton, T. E., F. E. Brautigam, J. A. Ferrer, and K. M. Johnson. Epizootic Venezuelan equine encephalomyelitis in Central America. Disease pattern and vaccine evaluation in Nicaragua, 1969-1970. *Am. J. Epidemiol.* 95:3:155-159, 1972.
568. Walton, T. E., O. Alvarez, Jr., R. K. Buckwalter, and K. M. Johnson. Experimental infection of horses with an attenuated Venezuelan equine encephalomyelitis vaccine (strain TC-83). *Infect. Immun.* 5:5:750-756, 1972.
569. Young, N. A. Origin of epidemics of Venezuelan equine encephalitis (Editorial). *J. Infect. Dis.* 125:565-567, 1972.
570. Zarate A., M. L., W. F. Scherer, and R. W. Dickerman. El virus de la encefalitis equina de Venezuela como determinante de infecciones en humanos, descripcion de un caso fatal ocurrido en Jalisco, Ver., en 1965. *Rev. Invest. Salud Publ.* 30:4:296-302, 1970.

571. Zhdanov, V. M., F. I. Ershov, and L. V. Uryvaev. (The replicative complex of the virus of Venezuelan equine encephalomyelitis). Dokl. Akad. Nauk SSSR 189:6:1382-1384, 1969. (Translation MUL 0408; AD 719 548).
572. Zhdanov, V. M., F. I. Ershov, L. V. Uryvaev, and D. I. Ivanovsky. Formation of infectious arbovirus ribonucleoprotein in subcellular structures. Nature 228:5277:1292-1294, 1970.
573. Zhdanov, V. M. (Replication complexes of some RNA viruses). Vestn. Akad. Med. Nauk SSSR 26:2:3-13, 1971 (Russ).
574. Zhdanov, V. M., F. I. Ershov, and L. V. Uryvaev. (Extracellular synthesis of infectious ribonucleoprotein on subcellular structures). Vestn. Akad. Med. Nauk SSSR 26:2:13-26, 1971. (Russ).

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